

## CLAIMS

1. A method for synchronous communication between a public electronic environment and a private electronic environment, comprising:

5 automatically routing a communication from a user in the public electronic environment to the private electronic environment;

obtaining a reply within the private electronic environment in response to the communication while the user waits therefor; and

automatically returning the reply from the private electronic environment to the public electronic environment.

10 2. The method of claim 1, wherein the public electronic environment comprises a front end application, wherein the private electronic environment comprises a back end Enterprise Resource Planning (ERP) application, wherein the automatically routing comprises automatically routing the communication from the front end application to the back end ERP application, wherein the obtaining comprises obtaining the reply from the ERP  
15 application, and wherein the automatically returning comprises automatically returning the reply from the ERP application to the front end application for providing to the user.

3. The method of claim 1, wherein the automatically routing comprises routing the communication through messaging middleware, and wherein the obtaining comprises obtaining by the messaging middleware the reply from the ERP application while the front  
20 end application and the messaging middleware wait therefor.

4. The method of claim 3, wherein the obtaining further comprises obtaining by the messaging middleware a command to be issued to the ERP application to trigger production of the reply.

5. The method of claim 3, wherein the automatically returning comprises  
5 returning the reply from the ERP application to the front end application through the messaging middleware.

6. The method of claim 3, wherein the front end application comprises a browser.

7. The method of claim 6, wherein the automatically routing comprises:  
10 sending the communication from the browser to a hosting server for a site on a global computer network;  
forwarding the communication from the hosting server to the messaging middleware; and  
forwarding the communication from the messaging middleware to the ERP  
15 application.

8. The method of claim 7, wherein the sending comprises employing encryption for the communication.

9. The method of claim 8, wherein the employing comprises employing at least 128-bit Secure Socket Layer (SSL) encryption.

10. The method of claim 7, wherein the messaging middleware comprises a first messaging client on the hosting server, a first messaging server, a second messaging server, and a second messaging client, and wherein forwarding the communication from the hosting server to the messaging middleware comprises:

5 forwarding the communication from the first messaging client to the first messaging server;

forwarding the communication from the first messaging server to the second messaging server; and

10 forwarding the communication from the second messaging server to the second messaging client.

11. The method of claim 10, wherein forwarding the communication from the first messaging client to the first messaging server comprises generating by the first messaging client a token identifier and forwarding a token identifier along with the communication, and wherein the automatically returning comprises returning the token identifier to the first  
15 messaging client for verification.

12. The method of claim 10, wherein forwarding the communication from the first messaging client to the first messaging server comprises encrypting the communication by the first messaging client.

13. The method of claim 12, wherein forwarding the communication from the  
20 second messaging server to the second messaging client comprises decrypting the communication by the second messaging server.

14. The method of claim 10, wherein forwarding the communication from the first messaging server to the second messaging server comprises forwarding the communication across a fire wall.

15. The method of claim 10, wherein the second messaging client comprises a module for issuing a command to the ERP application, wherein the obtaining comprises issuing the command from the second messaging client to the ERP application to trigger production of the reply, and wherein forwarding the communication from the messaging middleware to the ERP application comprises forwarding the communication from the second messaging client to the ERP application.

10 16. The method of claim 10, wherein forwarding the communication from the messaging middleware to the ERP application comprises forwarding the communication from the second messaging client to the ERP application, and wherein the automatically returning comprises:

15 sending the reply from the ERP application to the second messaging client;

forwarding the reply from the second messaging client to the second server;

forwarding the reply from the second server to the first server;

forwarding the reply from the first server to the first messaging client on the hosting server; and

returning the reply from the hosting server to the browser for display.

17. The method of claim 16, wherein forwarding the reply from the second server to the first server comprises forwarding the reply through a fire wall.

18. The method of claim 16, wherein forwarding the reply from the second messaging client to the second server comprises encrypting the reply.

5 19. The method of claim 18, wherein forwarding the reply from the first server to the first messaging client on the hosting server comprises decrypting the reply.

20. The method of claim 16, wherein returning the reply from the hosting server to the browser for display thereby comprises employing encryption for the reply.

21. The method of claim 20, wherein the employing comprises employing at least  
10 128-bit Secure Socket Layer (SSL) encryption.

22. The method of claim 7, wherein forwarding the communication from the hosting server to the messaging middleware and forwarding the communication from the messaging middleware to the ERP application comprise forwarding over a private network.

23. The method of claim 3, wherein the front end application comprises a  
15 browser, wherein the messaging middleware comprises at least two messaging clients and at least one messaging server, and wherein the automatically routing comprises:

sending the communication from the browser to a hosting server for a site on a global computer network, wherein one of the at least two messaging clients resides on the hosting server;

forwarding the communication from the hosting server to the at least one messaging server;

forwarding the communication from the at least one messaging server to another of the at least two messaging clients; and

5 forwarding the communication from the another of the at least two messaging clients to the ERP application.

24. The method of claim 3, wherein the messaging middleware comprises MQSERIES and the ERP application comprises SAP.

25. The method of claim 3, wherein the messaging middleware comprises  
10 MQSERIES.

26. The method of claim 3, wherein the messaging middleware comprises MSMQ.

27. The method of claim 2, wherein the ERP application comprises SAP.

28. The method of claim 2, wherein the ERP application comprises BAAN.

29. A system for synchronous communication between a public electronic environment and a private electronic environment, comprising:

means for automatically routing a communication from a user in the public electronic environment to the private electronic environment;

5 means for obtaining a reply within the private electronic environment in response to the communication while the user waits therefor; and

means for automatically returning the reply from the private electronic environment to the public electronic environment.

30. The system of claim 29, wherein the public electronic environment comprises  
10 a front end application, wherein the private electronic environment comprises a back end Enterprise Resource Planning (ERP) application, wherein the means for automatically routing comprises means for automatically routing the communication from the front end application to the back end ERP application, wherein the means for obtaining comprises means for obtaining the reply from the ERP application, and wherein the means for  
15 automatically returning comprises means for automatically returning the reply from the ERP application to the front end application for providing to the user.

31. The system of claim 29, wherein the means for automatically routing comprises means for routing the communication through messaging middleware, and wherein the means for obtaining comprises means for obtaining by the messaging  
20 middleware the reply from the ERP application while the front end application and the messaging middleware wait therefor.

32. The system of claim 31, wherein the means for obtaining further comprises means for causing by the messaging middleware a command to be issued to the ERP application to trigger production of the reply.

33. The system of claim 31, wherein the means for automatically returning  
5 comprises means for returning the reply from the ERP application to the front end application through the messaging middleware.

34. The system of claim 31, wherein the front end application comprises a browser.

35. The system of claim 34, wherein the means for automatically routing  
10 comprises:

means for sending the communication from the browser to a hosting server for a site on a global computer network;

means for forwarding the communication from the hosting server to the messaging middleware; and

15 means for forwarding the communication from the messaging middleware to the ERP application.

36. The system of claim 35, wherein the means for sending comprises means for employing encryption for the communication.

37. The system of claim 36, wherein the means for employing comprises means  
20 for employing at least 128-bit Secure Socket Layer (SSL) encryption.

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38. The system of claim 35, wherein the messaging middleware comprises a first messaging client on the hosting server, a first messaging server, a second messaging server, and a second messaging client, and wherein means for forwarding the communication from the hosting server to the messaging middleware comprises:

5 means for forwarding the communication from the first messaging client to the first messaging server;

means for forwarding the communication from the first messaging server to the second messaging server; and

10 means for forwarding the communication from the second messaging server to the second messaging client.

39. The system of claim 38, wherein means for forwarding the communication from the first messaging client to the first messaging server comprises means for generating by the first messaging client a token identifier and means for forwarding a token identifier along with the communication, and wherein the means for automatically returning comprises  
15 means for returning the token identifier to the first messaging client for verification.

40. The system of claim 38, wherein means for forwarding the communication from the first messaging client to the first messaging server comprises means for encrypting the communication by the first messaging client.

41. The system of claim 40, wherein means for forwarding the communication  
20 from the second messaging server to the second messaging client comprises means for decrypting the communication by the second messaging server.

42. The system of claim 38, wherein means for forwarding the communication from the first messaging server to the second messaging server comprises means for forwarding the communication across a fire wall.

43. The system of claim 38, wherein the second messaging client comprises a module for issuing a command to the ERP application, wherein the means for obtaining comprises means for issuing the command from the second messaging client to the ERP application to trigger production of the reply, and wherein means for forwarding the communication from the messaging middleware to the ERP application comprises means for forwarding the communication from the second messaging client to the ERP application.

44. The system of claim 38, wherein means for forwarding the communication from the messaging middleware to the ERP application comprises means for forwarding the communication from the second messaging client to the ERP application, and wherein the means for automatically returning comprises:

means for sending the reply from the ERP application to the second messaging client;

means for forwarding the reply from the second messaging client to the second server;

means for forwarding the reply from the second server to the first server;

means for forwarding the reply from the first server to the first messaging client on the hosting server; and

means for returning the reply from the hosting server to the browser for display.

45. The system of claim 44, wherein means for forwarding the reply from the second server to the first server comprises means for forwarding the reply through a fire wall.

5 46. The system of claim 44, wherein means for forwarding the reply from the second messaging client to the second server comprises means for encrypting the reply.

47. The system of claim 46, wherein means for forwarding the reply from the first server to the first messaging client on the hosting server comprises means for decrypting the reply.

10 48. The system of claim 44, wherein means for returning the reply from the hosting server to the browser for display thereby comprises means for employing encryption for the reply.

49. The system of claim 48, wherein the means for employing comprises means for employing at least 128-bit Secure Socket Layer (SSL) encryption.

15 50. The system of claim 35, wherein means for forwarding the communication from the hosting server to the messaging middleware and means for forwarding the communication from the messaging middleware to the ERP application comprise means for forwarding over a private network.

20 51. The system of claim 31, wherein the front end application comprises a browser, wherein the messaging middleware comprises at least two messaging clients and at least one messaging server, and wherein the means for automatically routing comprises:

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means for sending the communication from the browser to a hosting server for a site on a global computer network, wherein one of the at least two messaging clients resides on the hosting server;

5 means for forwarding the communication from the hosting server to the at least one messaging server;

means for forwarding the communication from the at least one messaging server to another of the at least two messaging clients; and

means for forwarding the communication from the another of the at least two messaging clients to the ERP application.

10 52. The system of claim 31, wherein the messaging middleware comprises MQSERIES and the ERP application comprises SAP.

53. The system of claim 31, wherein the messaging middleware comprises MQSERIES.

15 54. The system of claim 31, wherein the messaging middleware comprises MSMQ.

55. The system of claim 30, wherein the ERP application comprises SAP.

56. The system of claim 30, wherein the ERP application comprises BAAN.

57. At least one program storage device readable by a machine, tangibly embodying at least one program of instructions executable by the machine to perform a method for synchronous communication between a public electronic environment and a private electronic environment, comprising:

5 automatically routing a communication from a user in the public electronic environment to the private electronic environment;

obtaining a reply within the private electronic environment in response to the communication while the user waits therefor; and

10 automatically returning the reply from the private electronic environment to the public electronic environment.

58. The at least one program storage device of claim 57, wherein the public electronic environment comprises a front end application, wherein the private electronic environment comprises a back end Enterprise Resource Planning (ERP) application, wherein the automatically routing comprises automatically routing the communication from the front  
15 end application to the back end ERP application, wherein the obtaining comprises obtaining the reply from the ERP application, and wherein the automatically returning comprises automatically returning the reply from the ERP application to the front end application for providing to the user.

59. The at least one program storage device of claim 57, wherein the  
20 automatically routing comprises routing the communication through messaging middleware, and wherein the obtaining comprises obtaining by the messaging middleware the reply from the ERP application while the front end application and the messaging middleware wait therefor.

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60. The at least one program storage device of claim 59, wherein the obtaining further comprises causing by the messaging middleware a command to be issued to the ERP application to trigger production of the reply.

61. The at least one program storage device of claim 59, wherein the  
5 automatically returning comprises returning the reply from the ERP application to the front end application through the messaging middleware.

62. The at least one program storage device of claim 59, wherein the front end application comprises a browser.

63. The at least one program storage device of claim 62, wherein the  
10 automatically routing comprises:

sending the communication from the browser to a hosting server for a site on a global computer network;

forwarding the communication from the hosting server to the messaging middleware; and

15 forwarding the communication from the messaging middleware to the ERP application.

64. The at least one program storage device of claim 63, wherein the sending comprises employing encryption for the communication.

65. The at least one program storage device of claim 64, wherein the employing  
20 comprises employing at least 128-bit Secure Socket Layer (SSL) encryption.

66. The at least one program storage device of claim 63, wherein the messaging middleware comprises a first messaging client on the hosting server, a first messaging server, a second messaging server, and a second messaging client, and wherein forwarding the communication from the hosting server to the messaging middleware comprises:

5 forwarding the communication from the first messaging client to the first messaging server;

forwarding the communication from the first messaging server to the second messaging server; and

10 forwarding the communication from the second messaging server to the second messaging client.

67. The at least one program storage device of claim 66, wherein forwarding the communication from the first messaging client to the first messaging server comprises generating by the first messaging client a token identifier and forwarding a token identifier along with the communication, and wherein the automatically returning comprises returning  
15 the token identifier to the first messaging client for verification.

68. The at least one program storage device of claim 66, wherein forwarding the communication from the first messaging client to the first messaging server comprises encrypting the communication by the first messaging client.

69. The at least one program storage device of claim 68, wherein forwarding the  
20 communication from the second messaging server to the second messaging client comprises decrypting the communication by the second messaging server.

70. The at least one program storage device of claim 66, wherein forwarding the communication from the first messaging server to the second messaging server comprises forwarding the communication across a fire wall.

71. The at least one program storage device of claim 66, wherein the second messaging client comprises a module for issuing a command to the ERP application, wherein the causing comprises issuing the command from the second messaging client to the ERP application to trigger production of the reply, and wherein forwarding the communication from the messaging middleware to the ERP application comprises forwarding the communication from the second messaging client to the ERP application.

72. The at least one program storage device of claim 66, wherein forwarding the communication from the messaging middleware to the ERP application comprises forwarding the communication from the second messaging client to the ERP application, and wherein the automatically returning comprises:

sending the reply from the ERP application to the second messaging client;

forwarding the reply from the second messaging client to the second server;

forwarding the reply from the second server to the first server;

forwarding the reply from the first server to the first messaging client on the hosting server; and

returning the reply from the hosting server to the browser for display.



73. The at least one program storage device of claim 72, wherein forwarding the reply from the second server to the first server comprises forwarding the reply through a fire wall.

74. The at least one program storage device of claim 72, wherein forwarding the  
5 reply from the second messaging client to the second server comprises encrypting the reply.

75. The at least one program storage device of claim 74, wherein forwarding the reply from the first server to the first messaging client on the hosting server comprises decrypting the reply.

76. The at least one program storage device of claim 72, wherein returning the  
10 reply from the hosting server to the browser for display thereby comprises employing encryption for the reply.

77. The at least one program storage device of claim 76, wherein the employing comprises employing at least 128-bit Secure Socket Layer (SSL) encryption.

78. The at least one program storage device of claim 63, wherein forwarding the  
15 communication from the hosting server to the messaging middleware and forwarding the communication from the messaging middleware to the ERP application comprise forwarding over a private network.

79. The at least one program storage device of claim 59, wherein the front end application comprises a browser, wherein the messaging middleware comprises at least two  
20 messaging clients and at least one messaging server, and wherein the automatically routing comprises:

sending the communication from the browser to a hosting server for a site on a global computer network, wherein one of the at least two messaging clients resides on the hosting server;

5 forwarding the communication from the hosting server to the at least one messaging server;

forwarding the communication from the at least one messaging server to another of the at least two messaging clients; and

forwarding the communication from the another of the at least two messaging clients to the ERP application.

10 80. The at least one program storage device of claim 59, wherein the messaging middleware comprises MQSERIES and the ERP application comprises SAP.

81. The at least one program storage device of claim 59, wherein the messaging middleware comprises MQSERIES.

15 82. The at least one program storage device of claim 59, wherein the messaging middleware comprises MSMQ.

83. The at least one program storage device of claim 58, wherein the ERP application comprises SAP.

84. The at least one program storage device of claim 58, wherein the ERP application comprises BAAN.